

CLAIMS

What is claimed is:

5 1. A fuel cell assembly comprising a plurality of components wherein at least one joint between two adjacent components is sealed by a gasketing element including an alloy and a dielectric element.

10 2. A fuel cell assembly in accordance with Claim 1 wherein said gasketing element comprises a first alloy layer bonded to a first of said adjacent components, a second alloy layer bonded to a second of said adjacent components, and said dielectric element disposed between said first and second alloy layers.

15 3. A fuel cell assembly in accordance with Claim 2 wherein at least one of said first and second alloy layers is formed by brazing of a chemical composition including said alloy.

20 4. A fuel cell assembly in accordance with Claim 1 wherein said alloy is a braze alloy including silver.

 5. A fuel cell assembly in accordance with Claim 1 wherein said dielectric element is formed of yttrium-stabilized zirconia.

25 6. A fuel cell assembly in accordance with Claim 1 wherein said first and second adjacent components are components of a solid oxide fuel cell assembly.

30 7. A fuel cell assembly in accordance with Claim 1 wherein said assembly is an auxiliary power unit for a vehicle.

8. In a fuel cell assembly, a method for sealing surfaces between components of a fuel cell stack in said fuel cell assembly, comprising:

a.) forming a dielectric element in the general shape of the surfaces to be sealed;

b.) positioning said dielectric element adjacent at least one of said components;

c.) forming a paste of a braze alloy on at least one of said dielectric element and said at least one of said components;

d.) bringing said dielectric element, said paste and said at least one of said components together as an assembly; and

e.) sintering said assembly at a temperature whereby said braze alloy becomes liquefied and when cooled becomes bonded to said dielectric element and said at least one of said components of said fuel stack assembly to form said seal.

9. A method in accordance with Claim 8 wherein said braze alloy is powdered silver bronze.

10. A method in accordance with Claim 8 wherein said dielectric element is formed of yttrium-stabilized zirconia.

11. A method in accordance with Claim 8 wherein said at least one of said components is selected from a group consisting of anode plates and cathode plates.

12. A method in accordance with Claim 8 wherein said paste is formed on said dielectric element.

13. A method in accordance with Claim 8 wherein said fuel cell assembly is employed as an auxiliary unit in a vehicle.